Iowa Employment since the Great Recession

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Summary of Findings

The past decade has witnessed Iowa and the nation climbing out of the depths of the Great Recession that began late in 2007 and ended in mid-2009. This study is a comprehensive overview of how Iowa, its various industries, and its rural and urban areas have fared since.

Iowa had some great advantages heading into the past decade. It added many new ethanol plants between 2006 and 2010, mostly in rural parts of the state, and established itself as the nation's largest ethanol producer. Its wind energy sector, second largest nationally, expanded steadily, again mostly in rural Iowa counties. Iowa also benefitted during the decade from several large scale capital projects ranging from fertilizer production plants to data centers.

Over time, though, we don't measure the overall health of our economy in capital investments. We measure it in jobs. Jobs translate directly into worker earnings, which support household spending, which sustains businesses and communities. This study looks at jobs.

The report first compares the state of Iowa to the U.S. by broad category of industrial job growth. It also measures job growth controlling for metropolitan counties and nonmetropolitan counties.

Several industries stand out in Iowa, either as historical cornerstones of the state's economy or those that are performing better than average. This study looks specifically at the performance of agriculture and agriculture services; manufacturing; finance and insurance; professional, scientific, and technical services; and health care and social assistance.

The study concludes with an assessment of Iowa's labor force over the measurement period, including changes in metropolitan counties, micropolitan counties, and the remainder of the state.

All of the data for this study were obtained from the Bureau of Economic Analysis (BEA) or the Bureau of Labor Statistics (BLS).

Key Results

- Iowa's economy has added 137,549 jobs in this decade through 2018. The number of employed persons in Iowa grew by half that amount at 66,833 (see Figure 1).
- Iowa suffered less economic stress during the recession than much of the nation. Before beginning recovery, Iowa's 2010 employment had dropped 2.2 percent from pre-recession values in 2007, compared to a 5.5 percent decline for the nation (see Figure 2).
- Iowa's post-recession economy, though beginning recovery sooner, grew much slower than neighboring states, than the Plains region, and the nation. Between 2010 and 2018, Iowa ranked last among all of its bordering neighbors, last among all of the Plains

states, and 6th worst nationally in its rate of job growth (see Table 1, Table 2, and Figure 3).

- Iowa realized its strongest job gains in real estate and rental and leasing (which would include ag land rentals); followed by finance and insurance; health care and social assistance; transportation and warehousing; and professional scientific, and technical services (see Figure 4).
- Iowa suffered its worst job losses in durable goods manufacturing, followed by information industries, and retail trade.
- When compared to the U.S., Iowa outperformed the nation in the rate of job growth in the management of companies and enterprises, real estate and rental and leasing, agricultural services, and nondurable manufacturing (see Figure 5).
- Iowa diverged strongly from national growth rates in utilities, information, and administrative support and waste management industries.
- Overall, Iowa's metropolitan counties explain the net of all growth. They expanded by 9.3 percent between 2007 and 2018. Metropolitan job gains were led by health and social services; finance and insurance; professional scientific, and technical services; government and government enterprise; and real estate and rental and leasing (see Figure 6).
- Iowa's nonmetropolitan counties declined by 2.0 percent over the measurement period. An "All other" category composed mostly of transportation and warehouse industries as well as ag services saw relatively strong job gains, followed by real estate and rental and leasing, and by finance and insurance. Strong nonmetropolitan job losses occurred in health care and social assistance, retail trade, manufacturing, government and government enterprises, and in construction (see Figure 7).
- Farm employment (including farm proprietors) declined about 4 percent during this decade, but employment in agricultural services increased 13 percent (see Figure 8).
- Considering total employment, Iowa's manufacturing sector recovered to 97 percent of its 2007 level by 2018. The U.S. recovered to 90 percent of its 2007 level (see Figure 9). Nondurable manufacturing jobs in Iowa grew by 8.1 percent, but durable goods declined by 8.8 percent (see Figure 10).
- Iowa's finance and insurance industry grew by 18.3 percent between 2007 and 2018. The largest share of growth was in securities and other investments followed at a distant second by insurance carriers, agents, and related jobs (see Figure 11).
- Iowa added 30,659 health care and social assistance jobs to its metropolitan counties, but it lost 12,190 jobs in its nonmetropolitan areas. Statewide, the majority of net

growth in that sector in Iowa was in ambulatory health services, followed by jobs in residential and nursing care facilities (see Figure 12).

- Iowa enjoys a low unemployment rate, but the pace of labor force growth has varied over the last dozen years or so (see Figure 13 and Figure 14). In recent months, Iowa's overall labor supply has improved; however, when controlling for county urbanization level, substantial erosion is found in the state's micropolitan counties – counties with an urban core population of from 10,000 to 49,999. As would be expected, Iowa's metropolitan labor force has grown sharply. As with jobs, the net of labor force growth in the state is attributable to metropolitan growth (see Figure 15).

Introduction

One way to measure a state's economic health is by looking at employment. City and state leaders place a particularly high premium on job growth as an indicator of regional success. This report evaluates Iowa's employment performance since the onset of the Great Recession that began in late 2007 and ended in 2009.

Iowa's post-recession growth compares unfavorably to regional and national average rates. Since 2011, when nearly all states were finally growing again after the devastation of the Great Recession, Iowa's employment has grown more slowly than all of its neighbors.

Iowa's industry mix and its urbanization patterns both factor into its recent job growth performance. Some industrial sectors have grown, others are stagnant or declining. Some metropolitan areas (areas with a central city of 50,000 or more) are enjoying robust growth. Most of Iowa's smaller urbanized areas, especially its micropolitan areas (places with an urban population of at least 10,000 but less than 49,999), are not. Iowa's nonmetropolitan economies, as measured by total jobs, have not recovered to levels enjoyed before the Great Recession.

This report sorts out the gains and losses and explains why some areas perform better than others. The data for this evaluation all come from the Bureau of Economic Analysis (BEA) of the Department of Commerce, and the Bureau of Labor Statistics (BLS) of the Department of Labor. All compilations and transformations of the data were done by the author.

Most of the analysis by industrial sector and urbanization level describes job growth on a place of work basis, without distinguishing between full-time and part-time jobs or between resident job-holders or in-commuters. All jobs are counted equally at the place of employment. The labor force analysis in the last section of this report, in contrast, measures the number of employed and unemployed persons by their place of residence.

Job counts typically exceed the number of employed persons, as people can hold more than one job. In Iowa, for example, the number of employed persons grew by 66,833 between 2010 and 2018, but the number of jobs grew by 137,549. The state's economy added more than twice as many jobs as employed persons (see Figure 1).

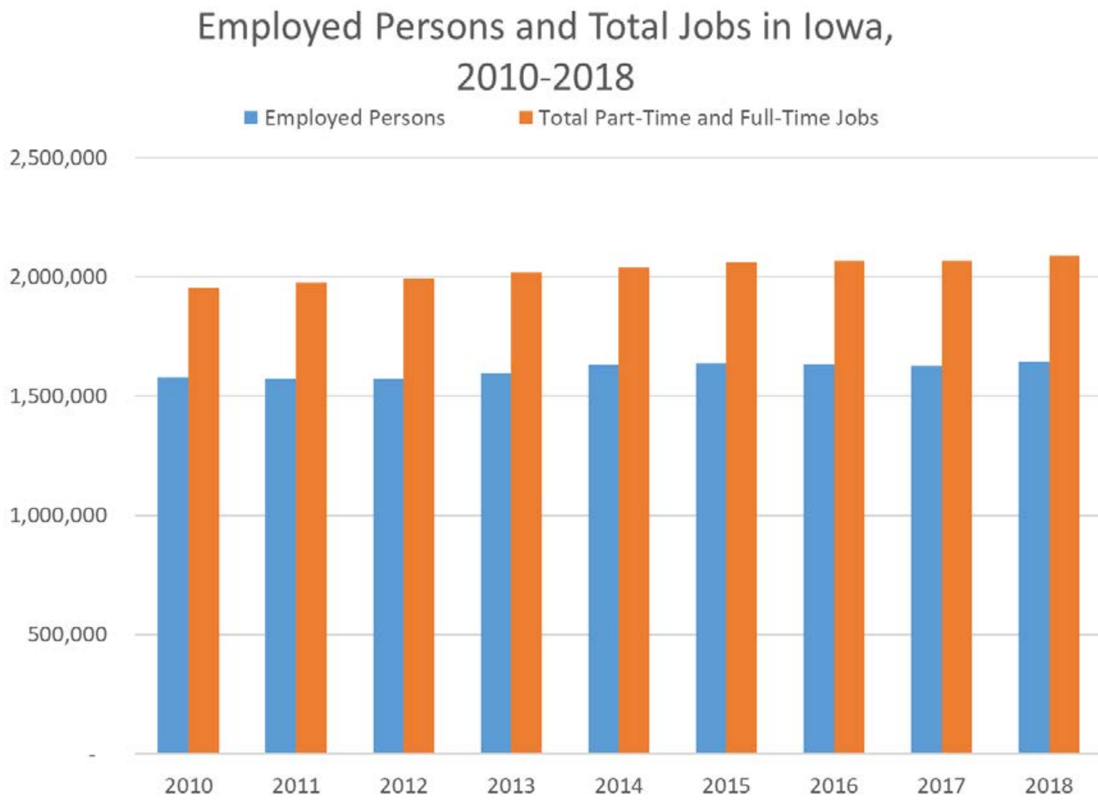

FIGURE 1

Employment in Iowa: Trends and Comparisons

Although the Great Recession ended before 2010, its impact on state and national employment trends lingered, to varying degrees, into the current decade. The U.S. economy lost 5.5 percent of its jobs between 2007 and 2010. Iowa jobs declined by just 2.2 percent. The brunt of the downturn affected many other states more than Iowa, which in fact was enjoying high levels of investment and job creation owing to its rapidly expanding corn ethanol industry and continued investment in wind energy generation during the downturn's worst periods. That plus relatively robust returns to farming at the time buffered the recession's early impact in Iowa.

Figure 2 illustrates the patterns of decline and recovery for the U.S. and Iowa using BEA job counts. The state of Iowa had recovered all of its lost jobs by 2013, somewhat sooner than the U.S. did, although the slope of recovery was much sharper nationally. By 2018, the U.S. economy, as measured by jobs, was 12 percent larger than it was in 2007. Iowa's economy was just 5 percent larger than its pre-recession size.

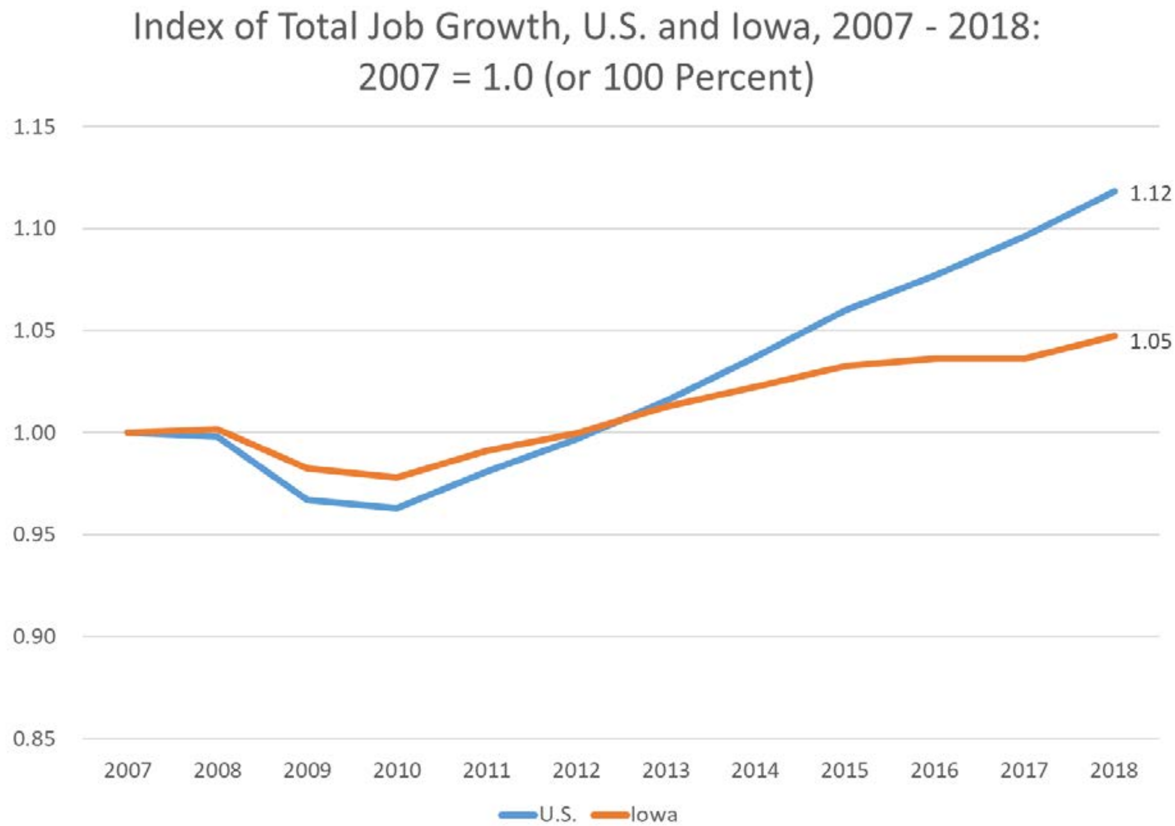

FIGURE 2

Iowa's growth in the decade of the 2010s lagged the national average. Between 2010 and 2018, job growth for the U.S. was 16.1 percent (Table 1). Both Utah and Florida grew in excess of 27 percent. All of the top 10 growth states were in the South or the West. The bottom 10 states were led by West Virginia and Alaska. Notably, the bottom four are all states whose economies are significantly dependent on coal and other fossil-based resources. Iowa ranked 6th worst nationally with a growth rate of 7.1 percent, which was less than half that of the nation.

TABLE 1

State Job Growth, 2010 - 2018

Top 10 States		Bottom 10 States	
United States	16.1%	United States	16.1%
Utah	27.2%	Kansas	7.7%
Florida	27.1%	Mississippi	7.7%
Nevada	24.7%	Maine	7.2%
Texas	23.4%	Connecticut	7.2%
California	23.3%	**Iowa**	**7.1%**
Colorado	22.9%	Vermont	6.6%
Arizona	21.3%	New Mexico	5.2%
Washington	20.9%	Wyoming	5.2%
South Carolina	20.6%	Alaska	3.4%
Georgia	20.4%	West Virginia	0.5%

It is evident in Table 2 that none of Iowa's neighbors grew anywhere near as much as the U.S. did this decade. Minnesota led at 11.4 percent. Iowa grew the least at 7.1 percent, and at a rate also substantially lower than the Plains states average of 9.4 percent.

TABLE 2

Iowa Job Growth, 2010 - 2018 Compared to Adjacent States	
United States	16.1%
Minnesota	11.4%
Illinois	9.7%
South Dakota	9.6%
Nebraska	9.5%
Wisconsin	9.0%
Missouri	8.8%
Iowa	**7.1%**
Plains States	9.4%

BLS payroll employment survey data provide a more detailed, monthly view of the dynamics of change in Iowa and its neighbors over this time period. Figure 3 illustrates the pace of growth for all of Iowa's bordering states plus Iowa using 12 month moving averages indexed to a base period of January 2010. Iowa was on par with or slightly exceeding its neighbors in growth through the end of 2014. By late 2015, though, growth slowed considerably and flattened until finally turning up in the fall of 2018. After that period of divergence ended, the slope of growth in the past year or so in Iowa is roughly the same as the aggregate performance of neighboring states.

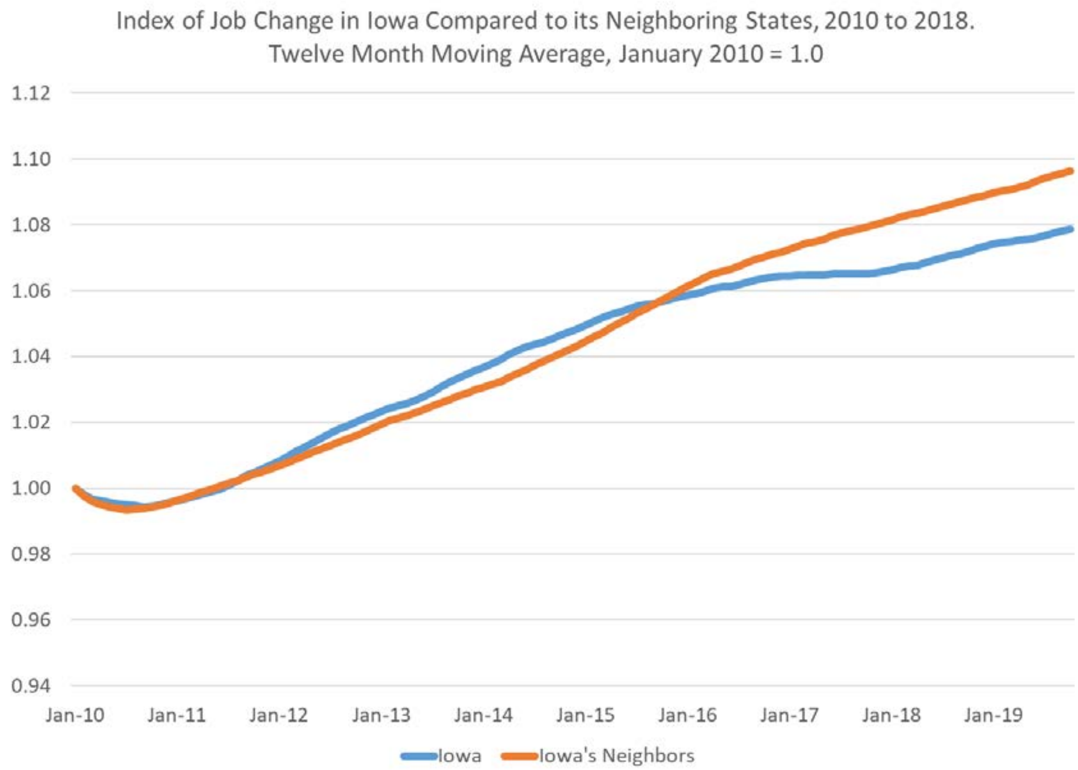

FIGURE 3

Decomposing Employment Change

Job growth after a recession includes recovered jobs that were lost during contraction as well as new jobs in expanding industries. Because the timing of recovery varies from one industry to another, growth rates as measured from the trough of the recession to the present may disguise structural trends in how the overall economy is evolving irrespective of the downturn and recovery.

A better approach for helping us understand Iowa's economy at the end of 2018 is to compare it to the economy we had in 2007 before the Great Recession began to take effect, which is what is mostly done in the remainder of this report.

Job Growth Magnitudes and Rates

Figure 4 Shows job changes by major industrial group in Iowa since 2007, before the Great Recession. Most growth is in jobs related to real estate and rental and leasing, which would also include the renting of farm land. The next four are finance and insurance; health care and social assistance; transportation and warehousing; and professional, scientific, and technical services.

Iowa's largest job losses were posted in durable goods manufacturing and in information industries, which includes print media along with digital media and related support industries.

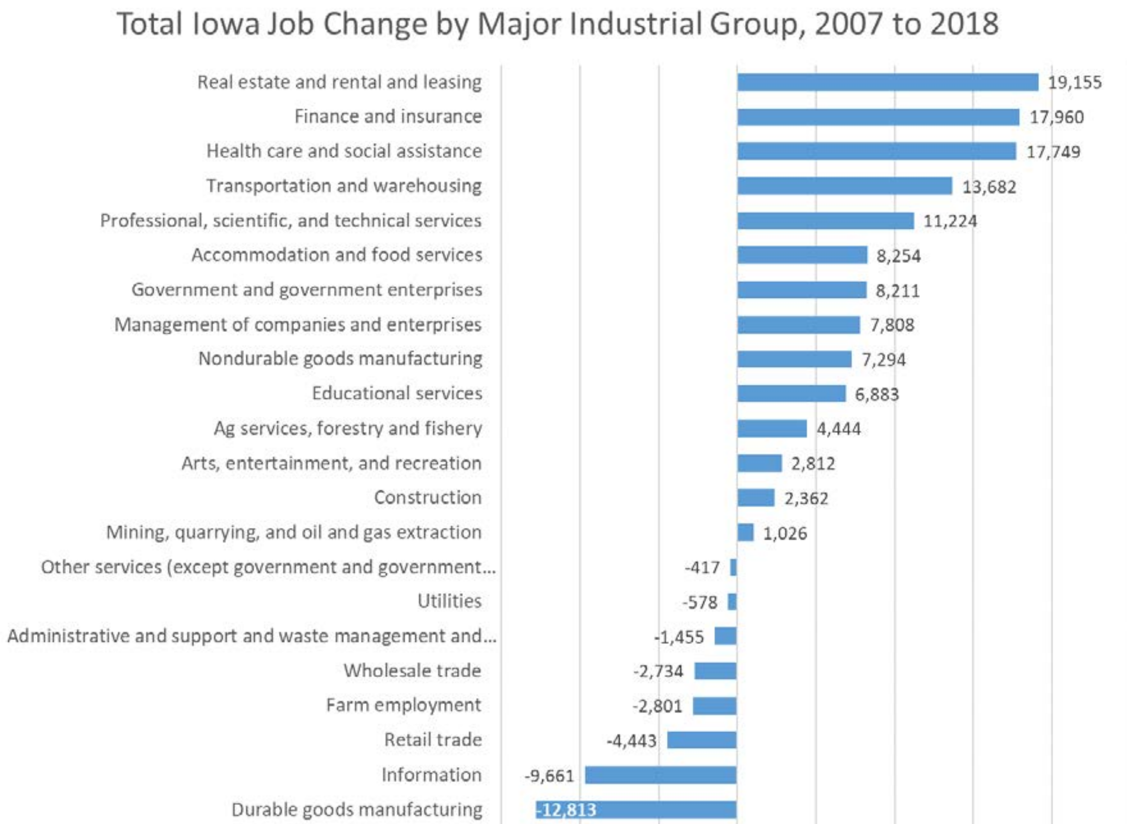

FIGURE 4

A national comparison provides more context for Iowa's growth patterns by industry. Figure 5 compares the growth rates in major U.S. industries with Iowa growth rates. Categories where Iowa exceeds the U.S. indicate statewide competitive advantages. Those where Iowa is demonstrably different from the U.S. indicate competitive disadvantages.

Iowa outperformed the U.S. in management of companies and enterprises, real estate and rental and leasing, agricultural services, nondurable manufacturing, and, to a lesser degree, in government jobs and construction jobs.

Notably strong divergence from the U.S. is found in utility jobs, information industries, and administrative support and waste management industries. Additionally Iowa had much slower growth rates in arts and entertainment industries, health care and social assistance, and accommodation and foods services.

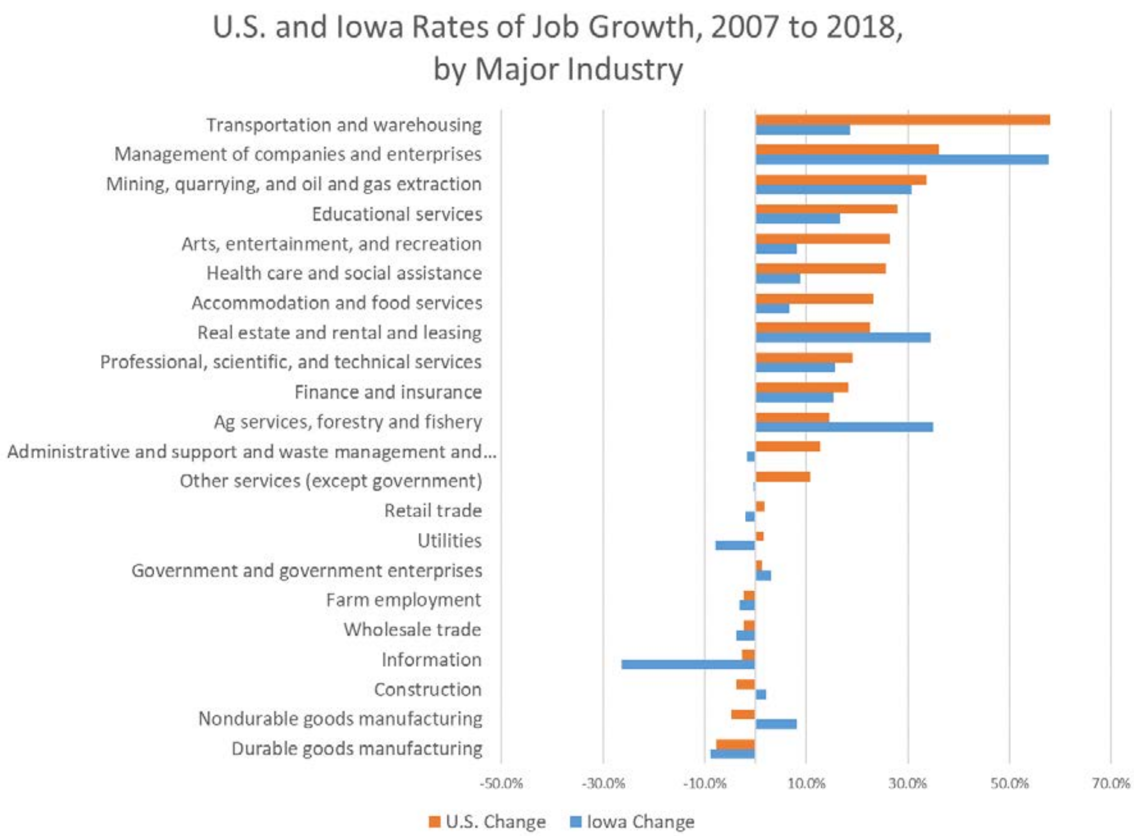

FIGURE 5

Assessing Iowa's Industrial Structure and Competitiveness

Iowa's industrial job changes can be further decomposed using a method called shift-share analysis. That analysis breaks out growth by broad industrial group by isolating job change given (1) the overall national rate of job growth, (2) the degrees to which different industrial sectors are growing faster or slower than the overall economy, and (3) whether the state's own industry sectors (as in Figure 5 above) are growing faster or slower than those sectors nationally. These three dimensions are the *national growth component*, the *industrial mix*, and the *competitive share component*. The sum of these three components equals the actual change in employment that occurred over the period measured.

- National Growth: Had Iowa grown at the overall national average rate of growth between 2007 and 2018, it would have added 235,475 jobs. Iowa, in fact, only added 40 percent of that total.
- Industrial Mix: Iowa's industrial portfolio includes many sectors that are growing slower than the overall national average like agriculture, manufacturing, construction, trade and government. It also contains some faster-growing sectors like finance and

insurance, professional and technical services, health care and social assistance, and accommodation and food services. If Iowa had started in 2007 with exactly the same proportional mix of jobs by sector as the U.S., the state might hypothetically have added 29,930 more jobs than it actually did. Accordingly, Iowa's industrial mix acts as a drag on potential growth.

- Competitive Share: as demonstrated above in Figure 5, Iowa has comparable strengths and weaknesses in specific industrial sectors. Overall, however, Iowa's competitive share yielded 111,583 fewer jobs than would have been the case had Iowa's industries all grown at the same rates as those same industries nationally.
- Adding the results: 235,475-29,930-111,583 = 93,962 net jobs added between 2007 and 2018.

Iowa's industrial mix slows the state's rate of growth because many of Iowa's prominent industries are slow growing or declining over time. The state's primary growth-limiting factor, though, was a deterioration in its competitiveness with other states. Many of Iowa's industrial sectors are growing slower than national averages. These competitiveness differences explained 80 percent of the gap between Iowa's expected growth and its actual growth.

Part of this is a function of Iowa's overall slower rate of population growth than the nation – population change leads to demands for goods and services, and a slower growing population will be reflected in employment growth. But employment growth, in turn, drives population growth – a slower growing economy does not attract as many new residents.

Controlling for Metro and Nonmetro Iowa

While Iowa's overall economy has grown, albeit much more slowly than our neighbors, there are sharp differences in job change between 2007 and 2018 when controlling for metropolitan and nonmetropolitan Iowa. Metropolitan areas are composed of core counties with a central city of 50,000 persons or more plus any surrounding counties that have a high economic dependence on that core county. In Iowa, there are 20 metropolitan counties. The remaining 79 Iowa counties are nonmetropolitan.

Figure 6 shows metropolitan job change between 2007 and 2018 by broad industrial group. There are slightly fewer industrial groups in this comparison because of data suppression, so some of the job change is allocated to an "all other" sector that combines transportation and warehousing, agricultural services, utilities, and mining.

In the metropolitan counties, more jobs were added in health care and social services by a substantial margin. There were strong gains, too, in finance and insurance; professional, scientific, and technical services; government employment; and real estate and rental and leasing. Large job declines were found in the information sector, which includes print and broadcast media, as well as digital communications and information technology support services like data centers. In all, the metro counties had 111,774 more jobs in 2018 than in 2007 – a 9.3 percent rate of total growth.

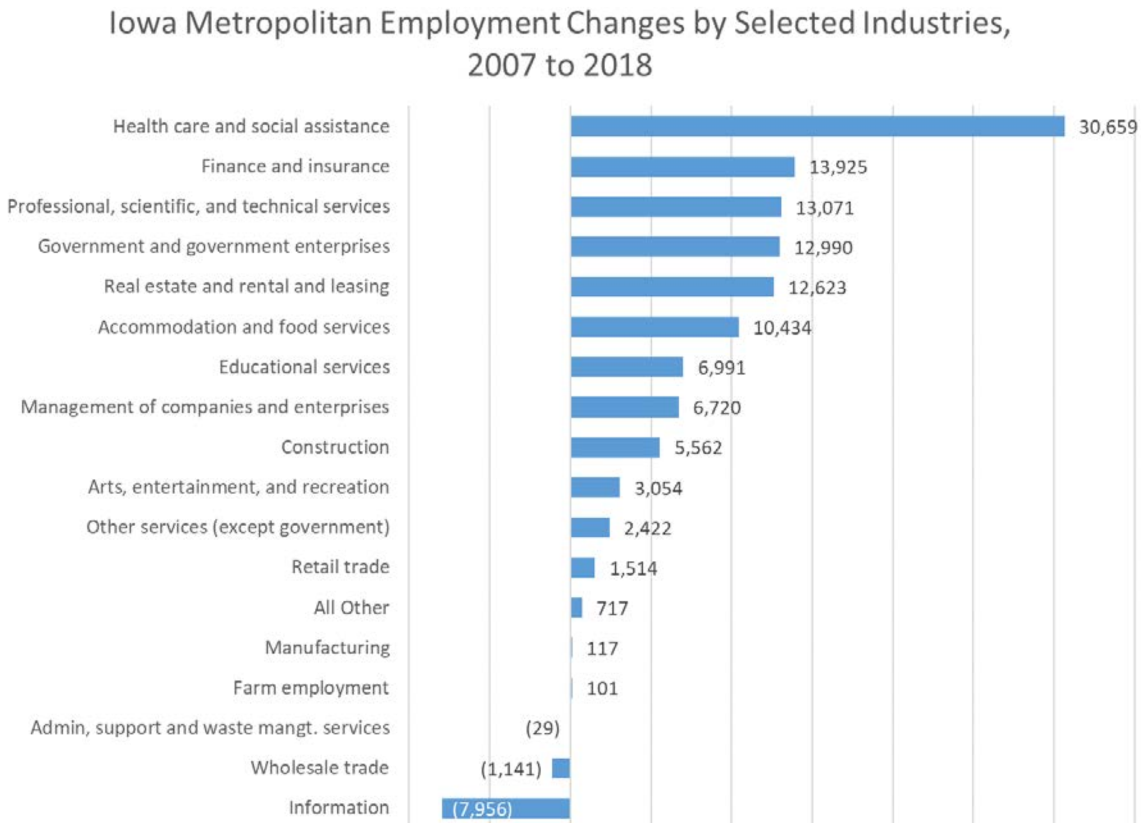

FIGURE 6

Aggregate nonmetropolitan performance is measured using the same industrial categories. Only four sectors posted growth: the all other sector, real estate and rental and leasing industries, finance and insurance, and management of companies. The growth in the all other sector is mostly due to statewide gains in transportation and warehousing as well as growth in agricultural services. Profound losses were isolated in health care and social services, followed by retail trade, manufacturing, and governments. Over the 2007 to 2018 time period, nonmetropolitan Iowa contracted by 16,046 jobs – a 2.0 percent rate of total decline.

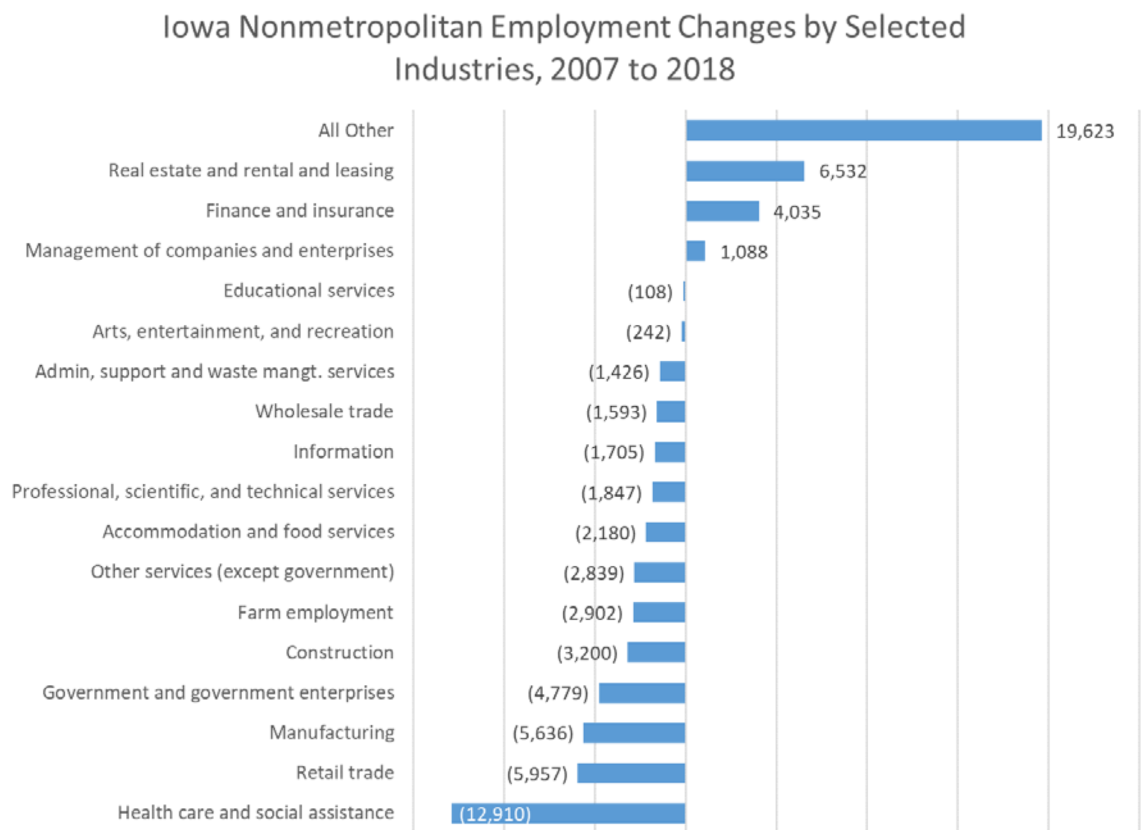

FIGURE 7

Obviously, the net of the state's growth is in its metropolitan areas. Categorically, relatively strong gains in finance and insurance jobs and in management of companies in the nonmetropolitan counties are in alignment with the metros. This is true, too, for real estate and rental and leasing, although metropolitan growth is driven by significant housing and commercial growth. Rural growth in this sector is also driven by the rental of agricultural land.

On the negative side, nonmetropolitan counties were in alignment with the metros in information jobs, wholesale jobs, and in administrative support and waste management jobs. The largest contrast was in health care and social assistance where metros added 30,659 jobs, but nonmetropolitan counties lost 12,910 jobs.

Focusing on Specific Sectors

It has already been established that Iowa's economy is performing differently than much of the rest of the U.S. economy. Two of its dominant sectors, agriculture and manufacturing, are stagnant or declining in terms of job production. The state also has significant prominence in finance and insurance industries and in professional, scientific, and technical services. Finally, as is the case nationally, one of the fastest growth categories, especially in Iowa's metropolitan areas, is the very broad health care and social services sector. This section looks at those components of the Iowa economy in more detail.

Agriculture

Iowa's agricultural sector, farming and ranching, has endured significant ups and downs this decade. Between 2011 and 2014, Iowa's farm proprietors realized record incomes (when adjusted for inflation), but by the end of 2018, Iowa's farm proprietors' real incomes were the lowest they had been in 20 years owing to strong crop production, slowing exports, and retaliatory trade actions on the part of the Chinese in response to punitive U.S. tariffs on Chinese imports.

Farmer purchases have in indirect effect on local economies and on the parts of Iowa's manufacturing sector that supply farm inputs. Changes in farmers' incomes influence those purchases. But Iowa's farm job economy, despite what many may presuppose, has had somewhat of a slower decline than was endured in the previous three decades. Actual farm employment (both proprietors and hired help), was 4 percent less than it was in 2010. In contrast, farm services employment, which supplies a range of critical farm inputs from fertilizers and chemicals to animal health grew by 13 percent this decade.

Iowa's combined direct farm employment plus all employment in agricultural services nonetheless declined by nearly 1,900 jobs over the decade – an average of about 19 jobs per county.

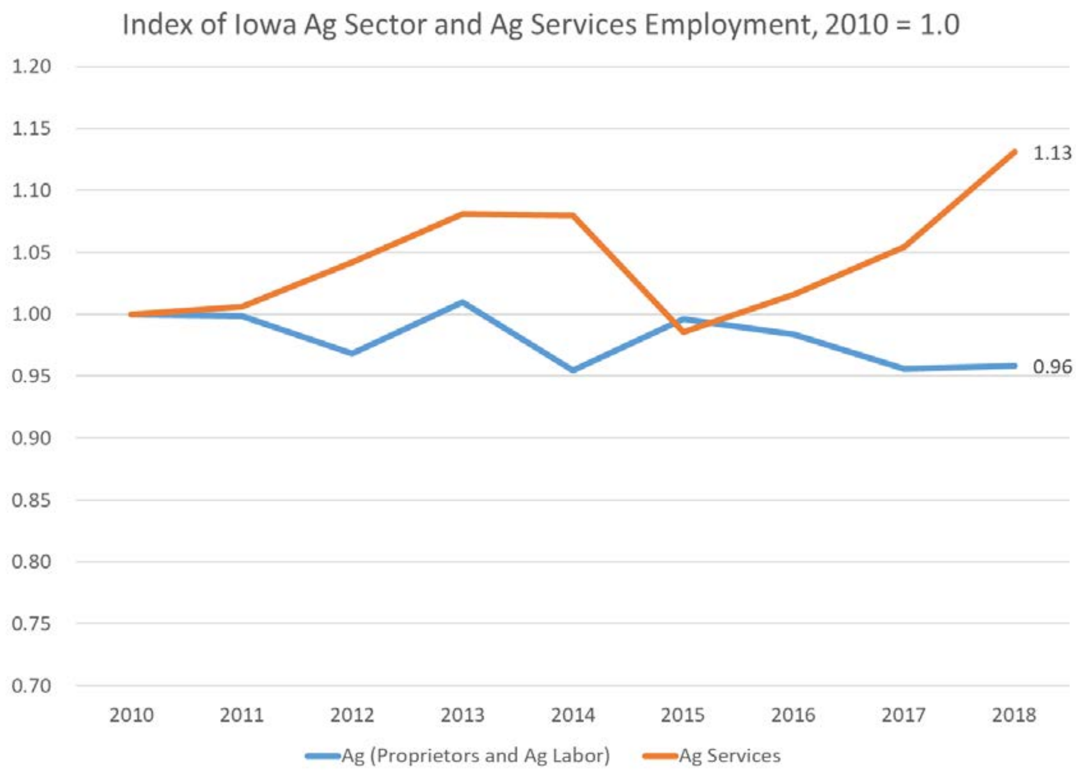

FIGURE 8

Manufacturing

Manufacturing is one of the largest employers in Iowa. The state is prominent in both durable goods manufacturing, like tractors and grain bins, and in nondurable manufacturing, like food processing and ethanol production. Manufacturing has a strong presence in both metropolitan and non-metropolitan areas. The metropolitan and nonmetropolitan dimension has already been highlighted in Figure 6 and Figure 7. Metropolitan manufacturing job levels recovered to pre-recession levels; nonmetropolitan manufacturing declined by 5,636 jobs between 2007 and 2018.

As the effects of the Great Recession continued on into the beginning portion of this decade, analysis of manufacturing performance is measured back to 2007, before the massive manufacturing downturn. Figure 9 relies on BLS data and shows clearly the pattern of Iowa manufacturing payroll job change over this period as it compares to the U.S. experience. Manufacturing jobs in Iowa remained stable through much of 2008 before declining by 13 percent as the recession took hold. The U.S. contracted much more sharply. Iowa's manufacturers recovered more rapidly than the U.S., initially, but went through a mild contraction between 2015 and 2017 before expanding again. In all, as measured through the middle of 2019, Iowa manufacturing jobs were about 3 percent less than before the Great Recession, while U.S. manufacturing jobs were about 10 percent less.

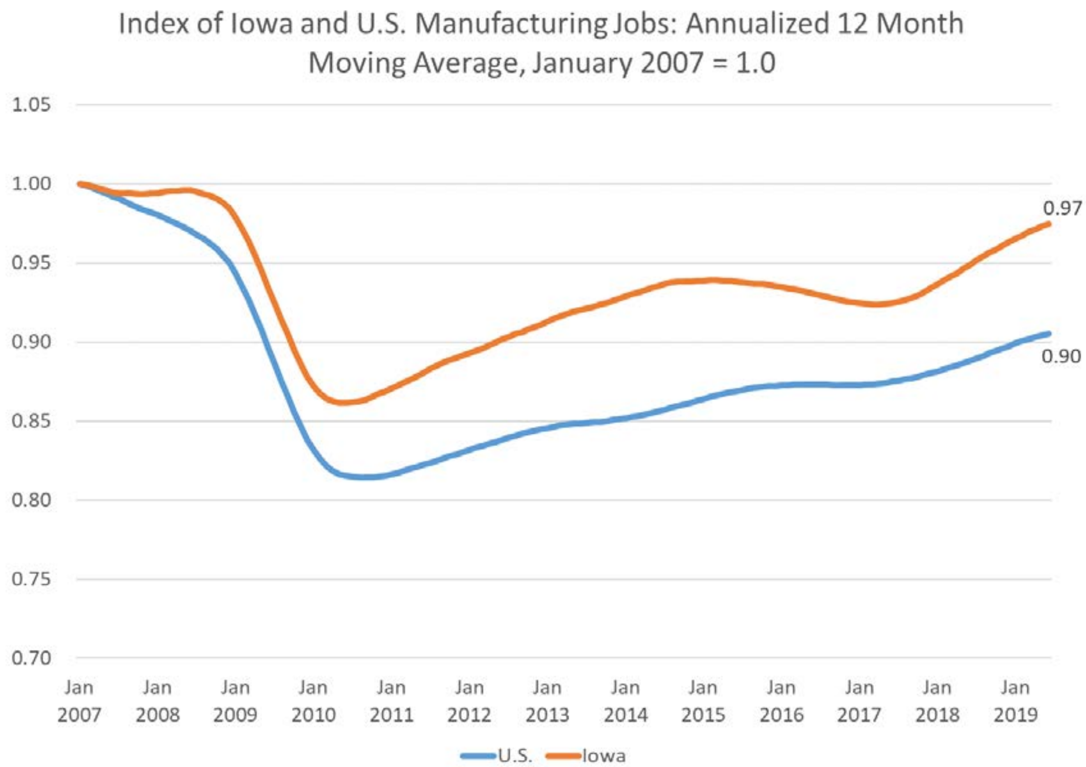

FIGURE 9

Shifting to BEA annual data through 2018, Figure 10 provides a sense of the kinds of changes that occurred in Iowa over this period controlling for durable and nondurable employment change. Durable manufacturing contracted 8.8 percent (12,813 jobs). By category, nonmetallic mineral products lost the most jobs, followed by machinery manufacturing, motor vehicles and parts, primary metals, and electrical equipment.

Nondurable manufacturing posted an 8.1 percent gain of 7,294 jobs. The vast majority of those were in food processing (6,933 jobs), followed by chemical products (ethanol, primarily), and beverage manufacturing (craft beer and small distilleries, mostly). Strong losses were found in printing, paper manufacturing, and in apparel products.

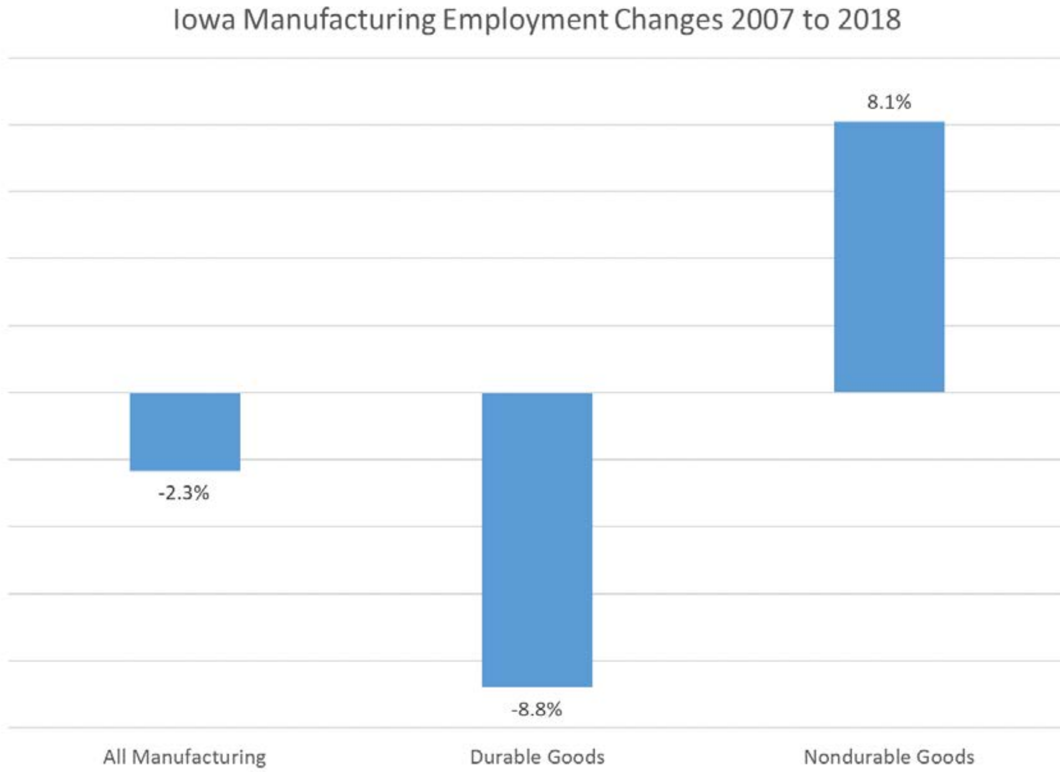

FIGURE 10

Finance and Insurance

Iowa's finance and insurance industry did a relatively good job of keeping pace with the national rate of growth in recent years. As illustrated in Figure 5, that broad sector grew by 15.4 percent in Iowa between 2007 and 2018, compared to 18.3 percent growth at the national level.

Figure 11 shows the job growth by subsector. Securities and other financial instruments employment grew by 75.8 percent (12,062 jobs). Iowa's very strong insurance industry expanded by 8.2 percent (4,428 jobs), and its banking sector added 1,953 jobs (4.5 percent) over this period.

Harkening back to Figure 6 and Figure 7, Iowa's metros added 13,925 jobs in the broad finance and insurance sector, and the nonmetropolitans added 4,045 jobs.

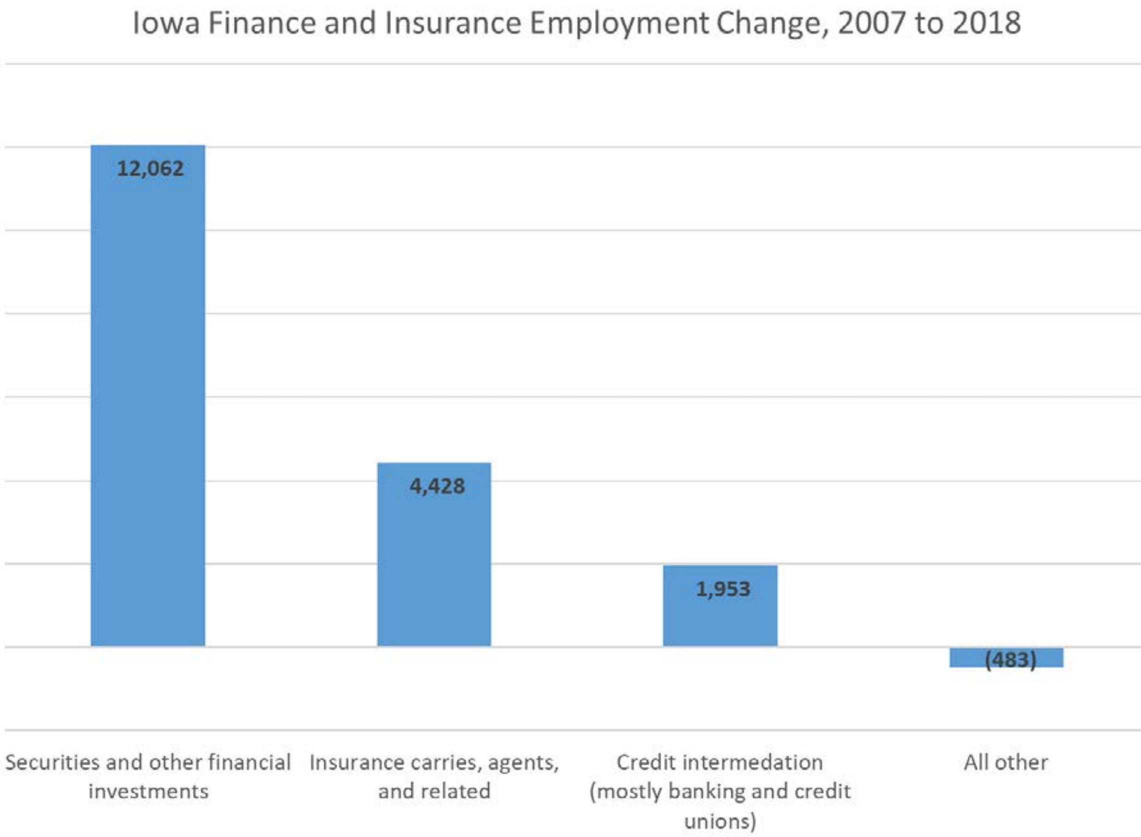

FIGURE 11

Professional, Scientific, and Technical Services

According to the BEA, this umbrella sector includes activities like legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

This Iowa sector grew closer to the national pace than most others. Between 2007 and 2018, it expanded by 15.7 percent in Iowa compared to 19.2 percent nationally. The BEA data do not allow us to discern which specific areas explained most of the growth, but Figure 6 and Figure 7 reveal that Iowa's metropolitan economies added 13,071 jobs, while its nonmetropolitan counties lost 1,847 jobs. This suggests that declining nonmetropolitan areas are unable to retain these types of jobs and that some of that economic activity is also shifting to the metropolitan economies.

Health Care and Social Assistance

Health care and social assistance is growing rapidly at the national level and in Iowa. U.S. growth between 2007 and 2018 was 25.6 percent; Iowa growth was much less, but still important, at 8.8 percent. That sector is large, and it accounted for a substantial fraction of net job growth in the state over this period.

The gains, however, are decidedly metropolitan. While the state posted a net gain of 17,749 jobs, metro area expansion was 30,659 jobs, and it represented the largest category of growth for Iowa's metropolitan economies. In stark contrast, nonmetro Iowa lost 12,190 jobs. This is a profound shift in the location of health care and social services employment and access.

BEA data allow us to isolate the subsector growth in health and social services employment (Figure 12) at the state level only. Of the net growth realized, 57 percent was in ambulatory health care services. These are the offices of physicians, dentists, and other conventional medical clinics and services. Social assistance jobs grew by 22 percent. These are services to individuals and families for a wide range of social assistance needs as well as food assistance and food banks. Nursing and residential care attends to the needs of the elderly and disabled, and it comprised 18 percent of the growth. Hospitals, only explained 3 percent of the change.

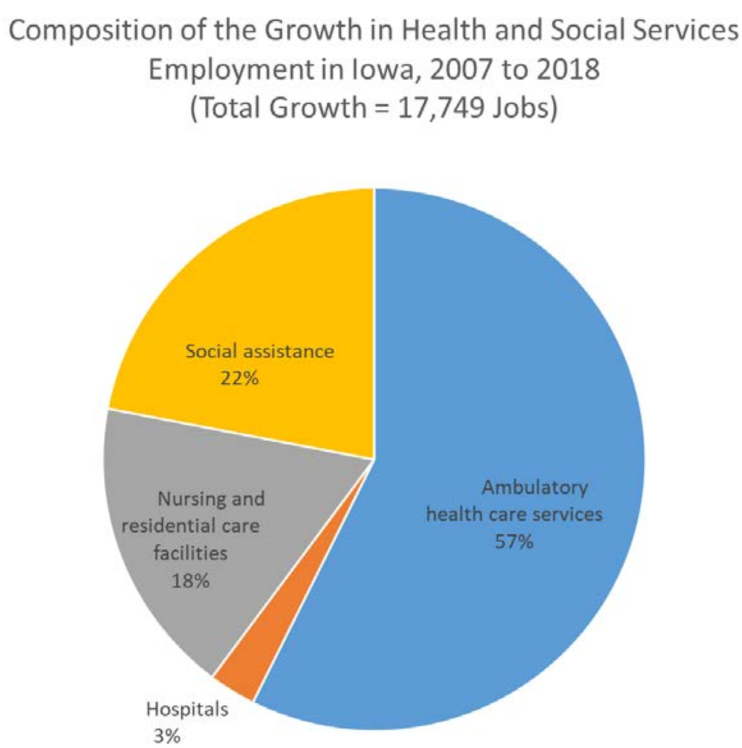

FIGURE 12

Iowa's Labor Force

The labor force is composed of the number of employed persons in Iowa (see Figure 1) plus the number of unemployed persons actively seeking employment. The number of persons actively seeking employment, the unemployed, divided by the labor force total equals the unemployment rate. Figure 13 compares the Iowa unemployment rate with the nation's. During the worst of the Great Recession, the U.S. rate hovered at nearly 10 percent. Iowa's rate peaked at 6.6 percent. The U.S. rate has since declined to 3.5 percent, and Iowa's rate is 2.6 percent, though it had been as low as 2.4 percent for much of 2019.

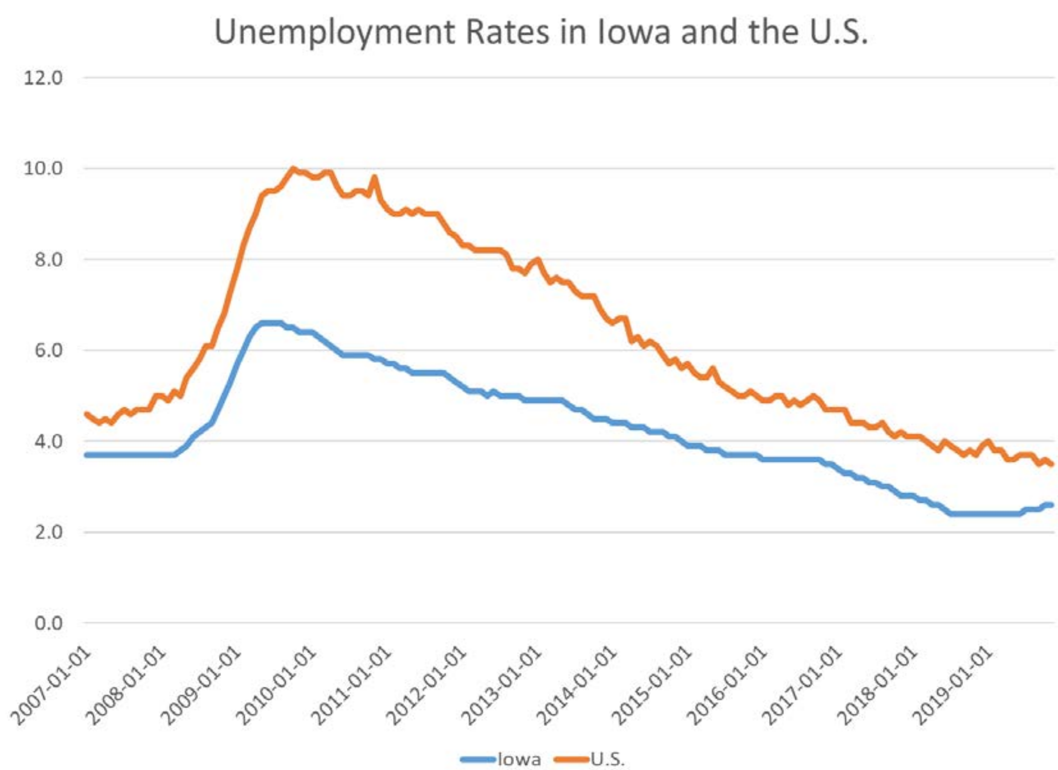

FIGURE 13

There are persons in Iowa who are not officially in the labor force because they are not actively seeking work or who are marginally attached to the workforce, like seasonal workers. Some may have disabilities or may be the parents of young children. Some, because of local economic conditions, are discouraged from seeking employment. Others may be without access to adequate transportation or housing. These persons might also still be in high school or attending college and are therefore not yet active labor force participants.

Iowa's overall labor force size, however, is an indication of the state's capacity to grow. Figure 14 contains annualized labor force levels based on monthly values for the U.S. and Iowa. During the worst of the Great Recession, the national labor force contracted slightly, as did Iowa's. But by the time that the Iowa economy started to grow in 2011 and 2012 in terms of total jobs, the state's labor force continued to contract. It rebounded sharply through early 2015, and then it contracted again. This latter contraction coincided with Iowa's period of overall employment stagnation described earlier. More recently, the state's labor force grew substantially. It was 4 percent higher by November of 2019 than it was in January 2007, compared to the U.S. growth rate of 8 percent over that same period.

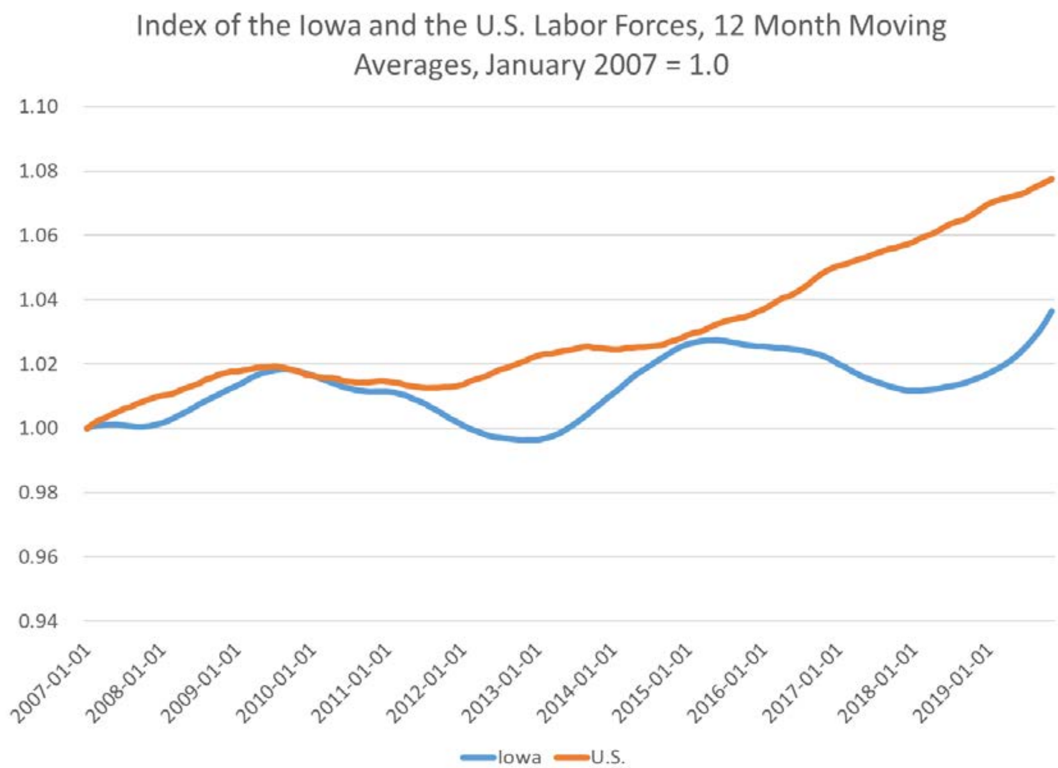

FIGURE 14

When the data allow, it is useful to understand labor force patterns by level of urbanization. Figure 15 tracks the indexed changes in the Iowa labor force for the state as a whole, for metropolitan counties, for the state's micropolitan counties (counties with an urbanized core of 10,000 but less than 50,000), and for the balance of the state. The divergence in growth comparing metro counties with micros and the balance of the state is stark. Both the micropolitan and the balance of the state had strong reductions in their labor supplies through 2014 before recovering for a period and then contracting. In addition, we see that the labor supplies in the micropolitan counties – those places with mid-sized cities – contracted the most. In recent months, however, all categories are experiencing labor force growth.

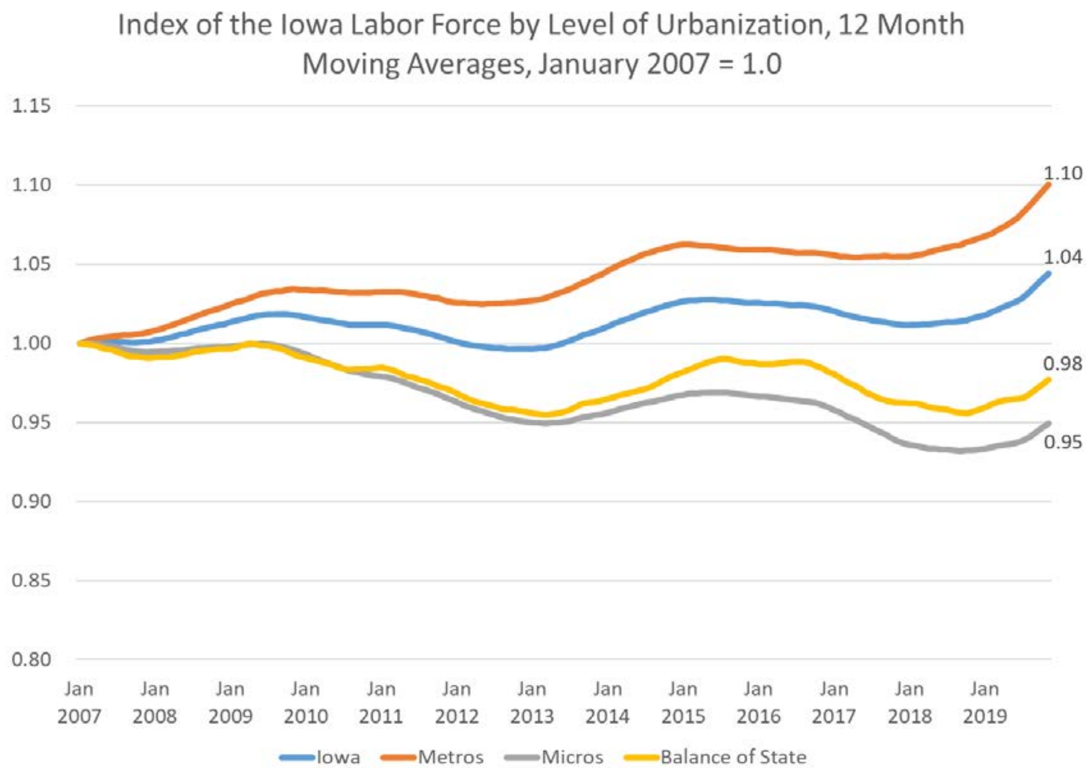

FIGURE 15